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Remarks

This Amendment is responsive to the Office Action of February 21, 2006. Reexamination and reconsideration of claims 1-11 and 20-23 is respectfully requested.

With respect to the Response to Arguments Section of the Office Action of February 21, 2006, Applicant respectfully submits that no portion of Bakke has been cited which specifically refers to a disclosure of I/O adapter failure. As discussed in greater detail below, Bakke consistently refers to physical path failure and does not teach, suggest or make obvious I/O adapter failover. One of ordinary skill in the art would not make this leap in interpretation from the disclosure of Bakke.

In Bakke, when a path fails, there is no discussion that its respective port has failed and certainly the I/O adapter has not failed. If the I/O adapter fails, then switching paths (as is the purpose of the Bakke disclosure) to the failed adapter would serve no purpose. At that point, any path connected to the failed I/O adapter would not cure the problem of the failed I/O adapter. Of course, this scenario is not discussed by Bakke because Bakke does not address failed adapters, only failed paths. Regardless of this issue, the present claims have been amended so that Bakke's I/O adapter or its paths can no longer be reasonably interpreted to read on the claimed appliances. Thus, Bakke fails to support the rejection and the rejection should be withdrawn as is discussed in greater detail herein.

Summary of The Office Action

Claims 1-11 and 20-23 were rejected under 35 U.S.C. 103(a) as being unpatentable over Bakke et al. (US Pat. No. 6,704,812) in view of Carney et al. (US Pat. No. 6,615,161).

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The Present Amendment

Independent Claim 1 has been amended to explicitly recite that the appliance is a computer remote from the central controller. Similarly, independent Claim 6 has been amended to explicitly recite that the intermediate collector is a computer remote from the central processing unit. Finally, independent Claim 20 has been amended to explicitly recite that an appliance is a computer and that the controller is remote from the appliances, and, failover to second appliance if a first appliance is disabled. No new matter has been introduced by these amendments. Support for these claim amendments can be found, for example, at paragraphs 24, 25 and 35 of the specification.

The Present Claims Patentably Distinguish Over the References of Record

Independent Claim 1

Claim 1 is directed to a method for configuring data communication paths between a central controller and a plurality of printing devices via a plurality of appliances. Figure 1 of the present application shows one embodiment where a central controller 20 communicates with remote appliances 30a, 30b, 30c, 30d through a network 16, and the appliances can communicate with remote devices 34 (e.g. printers) through a network 36. Claim 1 recites that an appliance is a computer remote from the central controller configured to collect diagnostic data from one or more printing devices and that the method includes mapping respective communication paths between the central controller and the printing devices to obtain an automatic appliance failover to allow diagnostic data to be collected from a selected printing device by way of multiple appliances.

Bakke teaches a system for the "management of multiple independent pathways to a computer system's peripheral devices." (Object of invention: column 2, lines 52-54). Bakke is further directed to determining when independent physical paths fail and does not mention automatic appliance failover as in the present claims. The Office Action cites the I/O adapters

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140, 150 as teaching the claimed appliances, but states that Bakke fails to teach an appliance configured to collect diagnostic data from the printing devices and to transmit the diagnostic data to the central controller. Carney is used to cure the shortcomings of Bakke but Applicant respectfully submits that their combination still fails to teach or suggest present claim 1.

The I/O adapter 140 of Bakke is integral to a computer system 100 and is an internal component of the computer system 100. (Fig. 1 and col. 6, lines 20-65). An adapter contains the necessary electronic components and logic to adapt or convert data of one protocol on one bus to another protocol on another bus. (Col. 7, lines 34-36). The buses are internal to the computer system 100. Thus, the I/O adapter 140 of Bakke is not an appliance that is a computer remote from a central controller as recited in claim 1 and the I/O adapter fails to teach or suggest the claimed appliances. For at least this reason, the rejection is overcome and should be withdrawn.

Further, Bakke is not concerned with and fails to discuss failed I/O adapters. Rather, Bakke states that an I/O adapter can be connected to a peripheral device with "multi-port connections to independent physical paths connected to the I/O adapter." (see column 5, lines 4-10). Bakke then states that the system includes "means to detect if an independent physical path has failed" and then "to reroute a command from the failed independent physical path" (column 5, line 24). Bakke does not address the failure of an I/O adapter. Significantly, throughout the disclosure of Bakke, it repeatedly discusses "a failed physical path". Therefore, even if the I/O adapter were interpreted to teach the claimed appliance (which it does not), Bakke fails to teach or suggest I/O adapter failover since it is only concerned with failed independent physical paths. If the I/O adapter would fail, switching the paths to the adapter as Bakke teaches would serve no purpose. No matter which path is used to the adapter, it still would not operate. Of course, this is not addressed or mentioned by Bakke since Bakke fails to teach or suggest what to do if the I/O adapter fails.

Additionally, Carney does not cure the shortcomings of Bakke. Carney shows in Figure 1 a computer station 106 that is connected to a peripheral device 102 (e.g. a printer). The computer station 106 can collect status information using a single in-memory management

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application or it can wait and receive notification from the peripheral device (see column 1, lines 45-54). Carney, however, does not discuss failover of the management application.

Furthermore, there is no teaching or suggestion of a plurality of management applications that can communicate with a central controller or being configured to obtain an automatic appliance failover to allow diagnostic data to be collected from a selected printing device by way of multiple appliances as recited in claim 1. As such, the actions performed with respect to the single in-memory management application of Carney are not the same as the actions performed with respect to the plurality of appliances as recited in claim 1. Carney thus fails to cure the shortcomings of Bakke.

Therefore, combining Bakke with Carney still fails to teach or suggest the recited features of claim 1. Claim 1, thus, patentably distinguishes over the references of record and is in condition for allowance. Accordingly, dependent claims 2-5 also patentably distinguish over the references and are in condition for allowance.

Independent Claim 6

Claim 6 recites determining which of the plurality of intermediate collectors are capable of communicating with one or more of the plurality of printing devices to obtain a communication map to allow an automatic intermediate collector failover to occur if an intermediate collector fails to operate. An intermediate collector is a computer remote from a central processing unit.

As explained previously, Bakke does not collect diagnostic data and fails to teach or suggest any processing in relation to an intermediate collector which is a computer remote from a central processing unit as claimed. Furthermore, Bakke only teaches determining failed physical paths and does not mention determining which intermediate collectors are capable of communicating. Thus, Bakke fails to teach or suggest obtaining a communication map to allow an automatic intermediate collector failover (as opposed to physical path failover) to occur if an intermediate collector fails to operate as recited in claim 6. Combining the teachings of Carney still fails to cure this shortcoming as described above.

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Since claim 6 recites features not taught or suggested by the references of record, claim 6 patentably distinguishes over the reference. Accordingly, dependent claims 7-11 also patentably distinguish over the reference and are in condition for allowance.

Independent Claim 20

Claim 20 recites a system comprising a plurality of printing devices and a plurality of appliances where an appliance is a computer configured to collect diagnostic data from one or more of the plurality of printing devices. Claim 20 further recites a controller remote from the appliances being configured to perform an automatic appliance failover to a second appliance using a map of the communication paths if communication with the first appliance fails in order to receive the diagnostic data relating to the selected printing device.

Bakke combined with Carney fails to teach or suggest the claimed system. As explained above, neither reference teaches or suggests a plurality of appliances that are computers remote from a central collector configured to collect diagnostic data. Carney only describes a single in-memory management application that can collect data (column 1, lines 45-54, or column 3, lines 25-28). Thus, Carney fails to teach or suggest multiple appliances that communicate with a controller as recited in claim 20. Furthermore, the in-memory application as taught by Carney is just that, in-memory, and is not a remote computer and is not an appliance as claimed.

As also described above, Bakke teaches determining failed physical paths, not failed I/O adapters as alleged in the Office Action. Bakke only reroutes commands to a different independent physical path (column 5, line 25-26). Bakke does not determine if I/O adapters fail. The Office Action admits that Bakke fails to teach the recited appliance (page 3). Thus, Bakke fails to teach or suggest a controller being configured to perform an automatic appliance failover to a second appliance using the map as recited in claim 20.

Therefore, the combination of Bakke and Carney still fail to teach or suggest all the features recited in claim 20 and the rejection is not supported. For at least these reasons, claim 20 patentably distinguishes over the references of record and is in condition for allowance.

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Accordingly, dependent claims 21-23 also patentably distinguish over the references and are in condition for allowance.

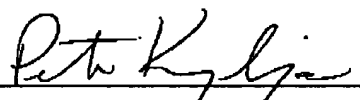
The references cited but not applied have been considered and do not teach or suggest the recited features of the respective claims, individually or in combination with each other. Therefore, all claims are in condition for allowance.

Conclusion

For the reasons set forth above, claims 1-11 and 20-23 patentably and unobviously distinguish over the references of record and are now in condition for allowance. An early allowance of all claims is earnestly solicited.

Respectfully submitted,

MAY 22, 2006


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